

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/064337 A1

(51) International Patent Classification⁷: **G01N 33/543**,
21/64, 21/76

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(21) International Application Number:
PCT/IB2004/052686

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(22) International Filing Date: 7 December 2004 (07.12.2004)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03104907.5 22 December 2003 (22.12.2003) EP
03104900.0 22 December 2003 (22.12.2003) EP

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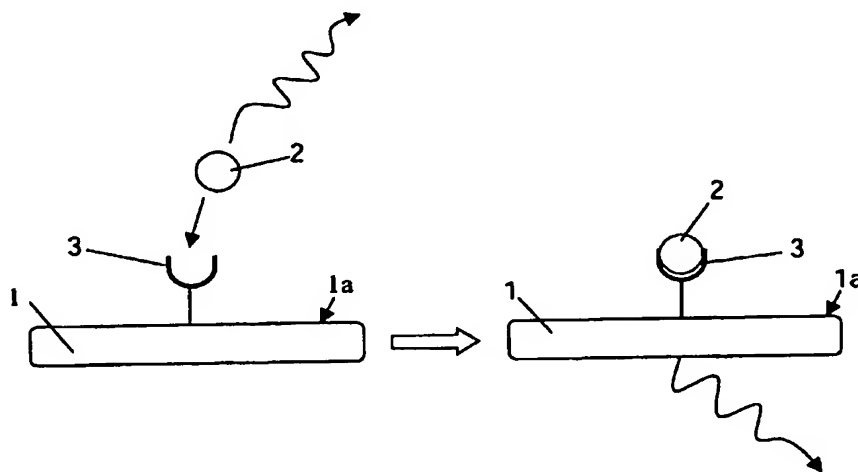
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

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[Continued on next page]

(54) Title: OPTICAL NANOWIRE BIOSENSOR BASED ON ENERGY TRANSFER



(57) Abstract: The present invention relates to the use of the optical properties of nanowires (1) for biomolecule (2) detection. The advantages of using nanowires (1) are a high specific surface area (1a) to bind receptor molecules (3) and size dependent optical properties because of strong quantum confinement of the carriers, i.e. nanowires (1) with different diameters show different colours. The proposed transduction mechanism is based on energy transfer between the biomolecule (2) and the nanowire (1) (or vice versa). Preferably, the target biomolecule (2) is a luminescent biomolecule (2), or said biomolecule (2) is labelled with a dye for quenching of the luminescence of the nanowire (1).